NORTH Dakota | Environmental Quality

Be Legendary.™

March 14, 2022

Mr. Dan Weber
Environmental Specialist
American Crystal Sugar
101 North Third Street
Moorhead, MN 56560-1990

Re: Air Quality
Title V (Revision)
Permit to Operate

Dear Mr. Weber:

Pursuant to the Air Pollution Control Rules of the State of North Dakota, the Department of Environmental Quality (Department) has reviewed your permit revision application dated December 21, 2021 for the Hillsboro Plant located in Traill County, North Dakota.

Enclosed is a copy of the Department's draft/proposed Title V Permit to Operate and statement of basis for the facility. Before making final determinations on the permit application, the Department provides for public comment by means of the enclosed public notice, to be immediately followed by a 45-day Environmental Protection Agency (EPA) review period. As indicated in the notice, the 30-day public comment period will begin March 20, 2022 and end April 18, 2022.

If any changes are subsequently made to the draft permit, then a review copy of the proposed permit reflecting those changes will be provided to EPA prior to the start of a 45-day EPA review period. The 45-day EPA review period will begin April 19, 2022 and end June 2, 2022.

All comments received will be considered in the final determination concerning issuance of the permit. The Department will take final action on the permit application following the public comment period and the EPA review period. You will be notified in writing of our final determination.

If you have any questions, please contact me at (701)328-5218 or email kkschneider@nd.gov.

Sincerely,

Kyla K. Schneider
Environmental Scientist
Division of Air Quality

KKS:saj
Enc:
xc/enc: Dan Fagnant, EPA/R8 (email - fagnant.daniel@epa.gov)
Gail Fallon, EPA/R8 (email - fallon.gail@epa.gov)

NOTICE OF INTENT TO ISSUE AN
AIR POLLUTION CONTROL
TITLE V PERMIT TO OPERATE

Take notice that the North Dakota Department of Environmental Quality (NDDEQ) proposes to issue a revised Air Pollution Control Permit to Operate to American Crystal Sugar for operation of the Hillsboro Plant in accordance with the ND Air Pollution Control Rules. The facility is located at 121 Highway 81 NE, Hillsboro in Traill County. The facility produces sugar, molasses extract and beet pulp pellets. The ACS mailing address is 101 N Third Street, Moorhead, MN 56560. The draft permit incorporates ACP-17993 v1.0.

A thirty-day public comment period for the draft permit will begin March 20, 2022 and end April 18, 2022. Direct comments in writing to the NDDEQ, Division of Air Quality, 4201 Normandy Street, Bismarck, ND 58503-1324 or email AirQuality@nd.gov, Re: Public Comment Permit Number AOP-28455 v5.1. Please note that, to be considered, comments submitted by email must be sent to the email address listed; comments sent to any other email address **will not** be considered. Comments must be received by 11:59 p.m. central time on the last day of the public comment period to be considered in the final permit determination. A public hearing regarding issuance of the permit will be held if a significant degree of public interest exists as determined by the NDDEQ. Requests for a public hearing must be received in writing by the NDDEQ before the end of the public comment period.

The notice, draft permit, statement of basis and application are available for review at the NDDEQ address and at the Division of Air Quality website at https://deq.nd.gov/AQ/PublicCom.aspx. A copy of these documents may be obtained by writing to the Division of Air Quality or contacting Kyla Schneider at (701)328-5218 or emailing kkschneider@nd.gov.

Dated this 14TH day of March 2022.

James L. Semerad
Director
Division of Air Quality

AIR POLLUTION CONTROL TITLE V PERMIT TO OPERATE

Permittee: **Name:** American Crystal Sugar Company **Address:** 101 N Third Street Moorhead, MN 56560-1990	**Permit Number:** AOP-28455 v5.1 **Source Name:** Hillsboro Plant
Source Location: 121 Highway 81 NE Hillsboro, ND 58045 NE ¼, NW ¼, Sec. 29, T146N, R50W Traill County	**Source Type:** Sugar Beet Processing
Expiration Date: March 22, 2025	

Pursuant to Chapter 23.1-06 of the North Dakota Century Code (NDCC), and the Air Pollution Control Rules of the State of North Dakota, Article 33.1-15 of the North Dakota Administrative Code (NDAC), and in reliance on statements and representations heretofore made by the permittee (i.e., owner) designated above, a Title V Permit to Operate is hereby issued authorizing such permittee to operate the emissions units at the location designated above. This Title V Permit to Operate is subject to all applicable rules and orders now or hereafter in effect of the North Dakota Department of Environmental Quality (Department) and to any conditions specified on the following pages. All conditions are enforceable by EPA and citizens under the Clean Air Act unless otherwise noted.

Renewal: 2/18/20
Revision (Sig. Mod.): TBD

James L. Semerad
Director
Division of Air Quality

Hillsboro Plant
Title V Permit to Operate
Table of Contents

1. **Emission Unit Identification:**

The emission units regulated by this permit are as follows:

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Two Foster-Wheeler coal-fired spreader stoker boilers with a nominal heat input capacity of 237 x 10^6 Btu/hr each and a nominal steam load capacity of 175,000 lbs/hr each. EU 1 also combusts biogas.	1	1 (Boiler No. 1 flue)	Two electrostatic precipitators
	2	2 (Boiler No. 2 flue)	Each boiler exhausts through a separate flue within a single stack.
Promill 24.5' x 65.6' coal and biogas-fired pulp dryer with a nominal capacity of 110 tons/hr of pressed pulp and a rated heat input of 230.3 x 10^6 Btu/hr	3	3A (Pulp dryer stack)	Two cyclones in parallel followed by a wet scrubber with exhaust gas recycle (EP 3A only)
		3B (Bypass stack)	
Sugar dryer/cooler with a 100 tons/hr nominal capacity	5	5	Baghouse
Pellet mill area which includes three pellet mills each with 18 tons/hr nominal capacity and a pellet cooler with a 30 tons/hr nominal capacity and dry pulp and pellet equipment	7	7	Two cyclones in parallel
	8	8	
	9	9	Two baghouses
Three sugar silos, Rotex sugar screening station, scale and associated conveying system with a 75 tons/hr nominal capacity	10 [A]	10	One Donaldson 162MB(w)8 baghouse and one Micro-Pulsaire baghouse
Mixed-feed vertical shaft lime kiln (Eberhardt, Model KR6.5) rated at 550 tons/day lime rock throughput consisting of the following emission sources: a) Balance vent exchange b) Carbonation (carb.) tank vent c) CO_2 header pressure relief vent Feedstock is lime rock. Fuel is coke and/or anthracite coal.	11	11A (Balance vent)	Inherent process controls [B]/good combustion practices
		11B (Combined carb. vent)	
		11C (Pressure vent)	
		11D (Startup/emergency bypass)	

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Lime slaker (Eberhardt) with a 12.8 ton lime/hr nominal capacity	12	12A (Steam vent) 12B (Fugitive)	None
Biogas flare (wastewater treatment system)	13	13	None
Weibull bin No. 3, conveying, and vacuum	14 [A]	14A 14B	Two air filters and one baghouse
Pellet storage bins	15	15A 15B 15C	None
Pellet loadout	16 [A]	Fug 1	None
Dry pulp dump	17 [A]	Fug 2	None
Coal pile wind erosion and coal handling	19 [A]	Fug 4	None
Lime rock handling emissions	20 [A]	Fug 5	None
Detroit Diesel 235 bhp diesel engine-driven emergency water pump (fire protection; manuf. 2000)	21 [A, C]	21	None
Pulp pellet loadout (nominal 240 ton/hr)	22	22	None
Pellet loading vacuum cleaning (pellet area)	23 [A]	23	Baghouse
Sugar Weibull bin No. 2 vacuum cleaning (sugar area)	24 [A]	24	Baghouse

[A] Insignificant or fugitive emission sources (no specific emission limit).

[B] Emissions from EU 11 are vented to a packed tower scrubber gas conditioning system as an inherent part of the process. The exhaust gases are then vented to carbonation tanks in the carbonation process. A portion of the exhaust gases are vented to a balance vent and a CO_2 pressure relief vent prior to the carbonation process.

[C] The potential to emit for an emergency stationary reciprocating internal combustion engine (RICE) is based on operating no more hours per year than is allowed by the subpart (40 CFR 63, Subpart ZZZZ) for other than emergency situations. For engines to be considered emergency stationary RICE under the RICE rules, engine operations must comply with the operating hour limits as specified in the applicable subpart. There is no time limit on the use of emergency stationary RICE in emergency situations [40 CFR 63, Subpart ZZZZ, §63.6640(f)].

2. **Applicable Standards, Restrictions and Miscellaneous Conditions**:

A. **Process Restrictions**:

1) The process weight rate (pulp and solid fuel) of the pulp dryer (EU 3) shall not exceed 122.3 tons/hr. Higher process weight rates may be allowed by the Department upon a demonstration of compliance with the emission limits in Condition 3.

Applicable Requirement: Permit to Construct (PTC)06001

B. **Fuel Restrictions**:

1) The boiler (EU 1) is restricted to combusting only subbituminous coal, coke fines, and/or anthracite coal fines and/or biogas.

Applicable Requirement: Air Construction Permit (ACP)-17816 v1.0

2) The boiler (EU 2) is restricted to combusting only subbituminous coal, coke fines, and/or anthracite coal fines.

Applicable Requirement: ACP-17816 v1.0

3) The lime kiln (EU 11) is restricted combusting only coke, anthracite coal or a mixture of coke and anthracite coal.

Applicable Requirement: ACP-17511 v1.0 & ACP-17816 v1.0

4) Engine EU 21 is restricted to combusting only distillate oil with no more than 0.0015 percent sulfur by weight. This fuel restriction ensures compliance with NDAC 33.1-15-06-01.2.

Applicable Requirement: NDAC 33.1-15-14-06.5.b(1) & NDAC 33.1-15-06-01.2

C. **Flare Stack Height and Fare Restrictions**:

1) The stack height for the flare shall be at a sufficient height to allow for adequate dispersion of sulfur dioxide (SO_2) necessary to meet the requirements of Chapter 33.1-15-02.

2) When it is necessary to operate the flare during emergency, malfunction or maintenance, all precautions shall be taken to minimize emissions and maintain compliance with the applicable ambient air quality standards as outlined in NDAC 33.1-15-02 and the opacity standard of 20% not to exceed 60% for more than one six-minute period per hour.

3) The flare must be equipped and operated with an automatic ignitor or a continuous burning pilot which must be maintained in good working order as outlined in NDAC 33.1-15-07-02.

4) The presence of a flame shall be monitored using a thermocouple or any other equivalent device approved by the Department.

Applicable Requirement: ACP-17993 v1.0

D. **New Source Performance Standards (NSPS)**: The permittee shall comply with all applicable requirements of the following NDAC 33.1-15-12-02 and 40 CFR 60 subparts in addition to complying with Subpart A – General Provisions.

1) Subpart Db – Industrial-commercial-institutional steam generating units (EU 1 and 2).

Applicable Requirements: NDAC 33.1-15-12-02, Subparts A & Db

E. **Maximum Achievable Control Technology (MACT)**: The permittee shall comply with all applicable requirements of the following NDAC 33.1-15-22-03 and 40 CFR 63 subparts in addition to complying with Subpart A - General Provisions.

1) Subpart ZZZZ (4Z) - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (EU 21).

2) Subpart DDDDD (5D) - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial and Institutional Boilers and Process Heaters (EU 1 and 2).

a) Conduct a tune-up of the solid fuel boilers (EU 1 and 2) annually, no later than 13 months after the previous tune-up, in accordance with §63.7540(a)(10). Alternatively, boilers with a continuous oxygen trim system that maintain an optimum air to fuel ratio must conduct a tune-up every 5 years, as specified in §63.7540(a)(10)(i) through (vi).

b) For boilers and process heaters (EU 1 and 2) that demonstrate compliance with a performance test, maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test.

Applicable Requirements: 33.1-15-22-03, Subparts A, ZZZZ & DDDDD

F. **Like-Kind Engine Replacement**: This permit allows the permittee to replace the existing engine(s) with a like-kind engine. Replacement is subject to the following conditions.

1) The Department must be notified within 10 days after change-out of the engine.

2) The replacement engine shall operate in the same manner, provide no increase in throughput and have equal or less emissions than the engine it is replacing.

3) The date of manufacture of the replacement engine must be included in the notification. The facility must comply with any applicable federal standards (e.g. NSPS, NESHAP, MACT) triggered by the replacement.

4) The replacement engine is subject to the same state emission limits as the existing engine in addition to any NSPS or MACT emission limit that is applicable.

Applicable Requirement: NDAC 33.1-15-14-06.5.b(1)

3. **Emission Unit Limits**:

Emission Unit Description	**EU**	**EP**	**Pollutant/ Parameter**	**Emission Limit/Parameter** [A]	**NDAC Applicable Requirement**
Foster-Wheeler boiler No. 1 Dual fuel coal and biogas [B]	1	1	Filterable PM (or TSM [C])	0.04 lb/10^6 Btu or (0.000053 lb/10^6 Btu) [D]	33.1-15-22, Subpart 5D
			PM/PM_{10}	11.85 lb/hr	PTC 12/6/85
			SO_2	3.0 lb/10^6 Btu & 264.4 lb/hr	33.1-15-06-01.2 & PTC 12/6/85
			NO_x	0.60 lb/10^6 Btu [E] & 142.2 lb/hr [E]	33.1-15-12, Subpart Db & PTC 12/6/85
			CO	160 ppm @ 3% O_2	33.1-15-22, Subpart 5D
			Hg	5.7 x 10^{-6} lb/10^6 Btu	33.1-15-22, Subpart 5D
			HCl	0.022 lb/10^6 Btu	33.1-15-22, Subpart 5D
			Opacity	10%	33.1-15-22, Subpart 5D & 33.1-15-03-02

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit/Parameter [A]	NDAC Applicable Requirement
Foster Wheeler boiler No. 2	2	2	Filterable PM or (TSM)	0.04 lb/10^6 Btu or (0.000053 lb/10^6 Btu) [D]	33.1-15-22, Subpart 5D
			PM/PM_{10}	11.85 lb/hr	PTC 12/6/85
			SO_2	3.0 lb/10^6 Btu & 264.4 lb/hr	33.1-15-06-01.2 & PTC 12/6/85
			NO_x	0.60 lb/10^6 Btu [E] & 142.2 lb/hr [E]	33.1-15-12, Subpart Db & PTC 12/6/85
			CO	160 ppm @ 3% O_2	33.1-15-22, Subpart 5D
			Hg	5.7 x 10^{-6} lb/10^6 Btu	33.1-15-22, Subpart 5D
			HCl	0.022 lb/10^6 Btu	33.1-15-22, Subpart 5D
			Opacity	10%	33.1-15-22, Subpart 5D & 33.1-15-03-02
Promill pulp dryer	3	3A	PM	52.0 lb/hr [F]	33.1-15-05-01.2 & PTC06001
			PM_{10}	52.0 lb/hr	PTC 6/11/97
			SO_2	63.3 lb/hr	PTC 6/11/97
			NO_x	100.0 lb/hr	PTC 6/11/97
			CO	700.0 lb/hr	ACP-17185 v1.0
			VOC	92.1 lb/hr	PTC 6/11/97
			Opacity	20% [G]	33.1-15-03-02
Sugar dryer/cooler	5	5	PM	1.5 lb/hr	33.1-15-03-02
			PM_{10}	1.5 lb/hr	33.1-15-03-02
			Opacity	20% [G]	33.1-15-03-02
Pellet mills, pellet cooler, dry pulp & pellet equip.	7, 8 & 9	7, 8 & 9	PM	4.8 lb/hr (total)	PTC 6/11/97
			PM_{10}	4.8 lb/hr (total)	PTC 6/11/97
			Opacity	20% [G]	33.1-15-03-02

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit/Parameter [A]	NDAC Applicable Requirement
Sugar loading area/silos including Rotex sugar screening station, scale and associated conveying	10	10	PM	1.5 lb/hr (total)	PTC Condition
			PM_{10}	1.5 lb/hr (total)	PTC Condition
			Opacity	20% [G]	33.1-15-03-02
Lime kiln	11	11A, 11B, 11C & 11D	PM/PM_{10}	10.7 lb/hr (total) & 0.47 lb/ton limerock (total)	33.1-15-15-01.2 (BACT) & ACP-17816 v1.0
			$PM_{2.5}$	8.5 lb/hr (total) & 0.37 lb/ton limerock (total)	33.1-15-15-01.2 (BACT) & ACP-17816 v1.0
			SO_2	11.5 lb/hr (total) & 0.5 lb/ton limerock (total)	33.1-15-06-01.2 & ACP-17816 v1.0
			NO_x	26.8 lb/hr (total) & 1.2 lb/ton limerock (total)	33.1-15-15-01.2 (BACT) & ACP-17816 v1.0
			CO	850 lb/hr (total) & 37.1 lb/ton limerock (total)	33.1-15-15-01.2 (BACT) & ACP-17816 v1.0
			VOC	2.0 lb/hr (total) & 0.09 lb/ton limerock (total)	33.1-15-02-07.1 & ACP-17816 v1.0
			Opacity	20%	33.1-15-15-01.2 (BACT) & ACP-17816 v1.0
Lime slaker	12	12A	PM/PM_{10}	3.07 lb/hr (total) & 0.24 lb/ton limerock (total)	33.1-15-15-01.2 (BACT) & ACP-17816 v1.0
			$PM_{2.5}$	1.14 lb/hr (total) & 0.09 lb/ton limerock (total)	33.1-15-15-01.2 (BACT) & ACP-17816 v1.0
			Opacity	20%	33.1-15-15-01.2 (BACT) & ACP-17816 v1.0
Biogas flare	13	13	SO_2	50.26 tons/yr (12-month rolling total)	ACP-17993 v1.0
			Opacity	20% [G]	ACP-17993 v1.0
Weibull bin No. 3, conveying and vacuum	14	14A & 14B	PM	0.2 lb/hr (total)	PTC 6/11/97
			PM_{10}	0.2 lb/hr (total)	PTC 6/11/97
			Opacity	20% [G]	33.1-15-03-02

Emission Unit Description	EU	EP	Pollutant/ Parameter	Emission Limit/Parameter [A]	NDAC Applicable Requirement
Pellet bins	15	15A, 15B & 15C	PM	1.5 lb/hr (total)	PTC 6/11/97
			PM_{10}	1.5 lb/hr (total)	PTC 6/11/97
			Opacity	20% [G]	33.1-15-03-02
Diesel emergency fire pump engine	21	21	NO_x	2.0 lb/hr	33.1-15-02
			Opacity	20% [G]	33.1-15-03-02
			Operating Hours	Cond. 1, Footnote C	33.1-15-14-06.4.c(3)(2) & 33.1-15-22-03, Subpart 4Z
Pulp pellet loadout	22	22	PM/PM_{10}	1.0 lb/hr	33.1-15-02-07.1, ACP-17196 v1.0 & ACP-17816 v1.0
			Opacity	20% [G]	33.1-15-03-02
Pellet loading vacuum cleaning (pellet area)	23	23	PM	0.03 lb/hr	ACP-17196 v1.0
			PM_{10}	0.03 lb/hr	ACP-17196 v1.0
			Opacity	20% [G]	33.1-15-03-02
Sugar Weibull bin No. 2 vacuum cleaning (sugar area)	24	24	PM	0.03 lb/hr	ACP-17196 v1.0
			PM_{10}	0.03 lb/hr	ACP-17196 v1.0
			Opacity	20% [G]	33.1-15-03-02

A Emission limits are based on a one-hour average, unless otherwise noted.

B Use of biogas was authorized in a July 13, 2007 Department letter, biogas emissions were expected to be less than coal emissions and no biogas specific emission limits were established; however, the unit was still required to meet coal operation emission limits.

C Total Selected Metals (TSM) - arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium

D The $lb/10^6$ Btu emission limits established by 40 CFR 63, Subpart 5D are more stringent than the $lb/10^6$ Btu emission limits established by 40 CFR 60, Subpart Db.

E 30-day rolling average

F The total allowable particulate emission rate from the pulp dryer (EU 3) is based on the process weight rate (p) which includes solid fuel and the following formulas up to a maximum of 52.0 lb/hr total particulate for the pulp dryer.

For process weight rates up to 30 tons/hr, where: p = process weight rate in tons/hr:
Allowable Emissions = $4.10\ p^{0.67}$ (lb/hr)

Or

For process weight rates in excess of 30 tons/hr, where: p = process weight rate in tons/hr:
Allowable Emissions = $55.0\ p^{0.11}$ - 40 (lb/hr)

Applicable Requirements: NDAC 33.1-15-05-01.2 & PTC06001

G Opacity Limits: The following are applicable requirements referred to for the various emission units listed in Condition 3.

1) EU 1 and EU 2 (boilers No. 1 and 2) are subject to 10% opacity on a daily block average. This standard applies at all times.

Applicable Requirement NDAC 33.1-15-02-03, Subpart DDDDD (Table 4, Item No. 4)

2) EU 13 (biogas flare) is subject to 20% opacity, except that a maximum of 60% is permissible for not more than one six-minute period per hour. This standard applies at all times.

Applicable Requirement: NDAC 33.1-15-03-03.1

3) Units except EU 1 and EU 2 (boilers No. 1 and No. 2), EU 11 (lime kiln), EU 12 (lime slaker), EU 13 (biogas flare), and EU 23 (pellet loading vacuum cleaning/pellet area) are subject to 20% opacity except that a maximum of 40% is permissible for not more than one six-minute period per hour. This standard applies at all times.

Applicable Requirement: NDAC 33.1-15-03-02

4. **Monitoring Requirements and Conditions:**

A. **Requirements:**

Emission Unit Description	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
Foster-Wheeler boilers No. 1 and No. 2 EU 1 & 2/EP 1 & 2	Filterable PM (or TSM)	Emissions Test	4.B.13, 4.B.14	33.1-15-22-03, Subpart 5D
	PM/PM_{10}	CAM	4.B.11	33.1-15-14-06.10
	SO_2	CEMS/CERMS	4.B.2)b & c	33.1-15-14-06.5.a(3)(a)
	NO_x	CEMS/CERMS	4.B.2	33.1-15-12, Subpart Db
	CO	Emissions Test & O&M	4.B.13, 4.B.14, 4.B.15	33.1-15-22-03, Subpart 5D
	Hg	Emissions Test	4.B.13, 4.B.14	33.1-15-22-03, Subpart 5D
	HCl	Emissions Test	4.B.13, 4.B.14	33.1-15-22-03, Subpart 5D
	Opacity	COMS	4.B.4	33.1-15-22-03, Subpart 5D & 33.1-15-12, Subpart Db
Promill pulp dryer EU 3/EP 3A	PM/PM_{10}/ Opacity	Emissions Test & CAM	4.B.3, 4.B.11	33.1-15-14-06.10 & 33.1-15-14-06.5.a(3)(a)
	SO_2	Fuel Analysis & SO_2 Calculation	4.B.1, 4.B.6	33.1-15-14-06.5.a(3)(a)
	NO_x	Emissions Test	4.B.3	33.1-15-14-06.5.a(3)(a)
	CO	Emissions Test	4.B.3	33.1-15-14-06.5.a(3)(a)
	VOC	Emissions Test	4.B.3	33.1-15-14-06.5.a(3)(a)
Sugar dryer/cooler EU 5/EP 5	PM/PM_{10}/ Opacity	CAM	4.B.11	33.1-15-14-06.10
Pellet mills, pellet cooler, dry pulp & pellet equip. EU 7, 8 & 9/EP 7, 8 & 9	PM/PM_{10}/ Opacity	Visible Emissions Observations (VEO) (EU 7 & 8)	4.B.5	33.1-15-14-06.5.a(2)(a)
		CAM (EU 9)	4.B.11	33.1-15-14-06.10

Emission Unit Description	Pollutant/ Parameter	Monitoring Requirement (Method)	Condition Number	NDAC Applicable Requirement
Sugar loading area/silos including Rotex sugar screening station, scale and associated conveying EU 10/EP 10	PM/PM_{10}/ Opacity	CAM	4.B.11	33.1-15-14-06.10
Lime kiln EU 11/EP 11	$PM/PM_{10}/PM_{2.5}$/Opacity	Emissions Test & Water Flow Rate	4.B.3 & 4.B.12	33.1-15-14-06.5.a(3)(a)
	SO_2	O&M & Equipment Design	4.B.15 & 4.B.16	33.1-15-14-06.5.a(3)(a)
	NO_x	Emissions Test	4.B.3	33.1-15-01-12
	CO	Emissions Test	4.B.3	33.1-15-01-12
	VOC	O&M & Equipment Design	4.B.15 & 4.B.16	33.1-15-14-06.5.a(3)(a)
Lime slaker EU 12/EP 12A	$PM/PM_{10}/PM_{2.5}$/Opacity	Emissions Test & VEO	4.B.3, 4.B.5	33.1-15-01-12 & 33.1-15-14-06.5.a(3)(a)
Biogas flare EU 13/EP 13	H_2S	Gas Analysis	4.B.7	ACP-17993 v1.0
	SO_2	Calculation	4.B.8	ACP-17993 v1.0
	Opacity	Recordkeeping	4.B.9	33.1-15-14-06.5.a(3)(a)
Pellet bins EU 15/EP 15A, 15B & 15C	PM/PM_{10}/ Opacity	VEO	4.B.5	33.1-15-14-06.5.a(3)(a)
Diesel emergency fire pump engine EU 21/EP 21	NO_x/Opacity	Recordkeeping	4.B.17	33.1-15-14-06.5.a(3)(a)
	Operating Hours	Recordkeeping	4.B.10	33.1-15-22, Subpart ZZZZ
Pulp pellet loadout EU 22/EP 22	PM/PM_{10}/ Opacity	CAM	4.B.11	33.1-15-14-06.10

B. **Monitoring Conditions**:

1) The sulfur content of the fuel used (coal) shall be analyzed with each shipment using ASTM or Department approved methods. The sulfur analysis for the fuel may be conducted by the permittee or by the source where the fuel is purchased. The permittee shall calculate sulfur dioxide emission rates for each shipment of fuel using the following equations or other methods approved by the Department.

a) Pulp Dryer (EU 3/EP 3):

For Coal:

SO_2 emissions (lb per million Btu) = 35S x ER / EC

Where: 35S = Emission factor (lb/ton) for subbituminous coal, and S is weight % sulfur content in coal as fired; for lignite coal use 30S. (From AP-42, Fifth Edition.)

ER = Emission correction factor.

EC = As fired coal energy content in 10^6 Btu per ton.

Note: An emission correction factor for EU 3 (pulp dryer) shall be assumed to be 1 until supported with emissions data from the most recent, satisfactory test.

SO_2 emissions (lb/hr) = SO_2 emissions (lb per million Btu) x FR

Where: FR = Firing rate of emission unit in 10^6 Btu per hour.

2) Monitoring Systems:

a) The permittee shall conduct monitoring of NO_x emissions in accordance with 40 CFR 60, Subpart Db.

The permittee shall calibrate, operate and maintain a system for continuously monitoring and recording NO_x on a lb/10^6 Btu basis. The monitoring and recording shall be in accordance with the requirements for Notification and Recordkeeping (40 CFR 60.7) and monitoring requirements (40 CFR 60.13) as adopted by reference in the North Dakota Air Pollution Control Rules under section 33.1-15-12-02 or quality assurance procedures approved in advance by the Department.

The quality assurance requirements applicable to the CEMS are specified in Appendix F of 40 CFR 60.

b) CEMS/CERMS: The monitoring systems shall report NO_x and SO_2 emissions on a lb/10^6 Btu and lb/hr basis. The continuous emission monitoring systems (CEMS) and continuous emission rate monitoring systems (CERMS) shall be used to determine compliance with the NO_x and SO_2 emission limits applicable to EU 1 and EU 2. The CEMS and the CERMS shall be certified to comply with the applicable requirements of 40 CFR 60, Appendix B, Performance Specification 2 for a CEMS and Performance Specification 6 for a CERMS. A relative accuracy test audit (RATA) shall be conducted annually on the NO_x and SO_2 CEMS and CERMS in accordance with the applicable procedures in 40 CFR 60, Appendix B,

Performance Specification 2 for a CEMS and Performance Specification 6 for a CERMS.

c) When a failure of a CEMS or CERMS occurs, an alternative method, acceptable to the Department, for measuring or estimating emissions must be undertaken as soon as possible. Timely repair of the emission monitoring system must be made. The Department may require additional audits of the CEMs.

3) Within two years following issuance of a renewal permit, to provide a reasonable assurance of compliance, an emissions test shall be conducted to measure PM/PM_{10}, NO_x, CO and volatile organic compounds (VOC) emissions from EU 3 (pulp dryer), $PM/PM_{10}/PM_{2.5}$, NO_x and CO emissions from EU 11 (lime kiln) and $PM/PM_{10}/PM_{2.5}$ emissions from EU 12 (lime slaker). The emissions tests shall be conducted using EPA Test Methods in 40 CFR 60, Appendix A or at a minimum a portable analyzer method approved by the Department. A test shall consist of three runs, with each run one hour in length for particulate and twenty minutes in length for NO_x, CO and VOC. Other test methods may be used provided they are approved in advance by the Department.

4) a) Monitoring of opacity shall be in accordance with the requirements of 40 CFR 60, Subpart Db, Section 60.48b, as incorporated by reference into NDAC 33.1-15-12 and 40 CFR 63, Subpart DDDDD, as incorporated by reference into NDAC 33.1-15-22-03. Monitoring shall be in accordance with the requirements of 40 CFR 60, Subpart A, Section 60.13, Monitoring Requirements and 40 CFR 60, Appendix F, Procedure 3 - Quality Assurance Procedures for Continuous Opacity Monitoring Systems at Stationary Sources as incorporated by reference into NDAC 33.1-15-12. The requirements of 40 CFR 60, Appendix F, Procedure 3 include daily calibration checks, quarterly performance audits and annual primary zero alignment under clear path conditions.

b) The permittee shall conduct performance evaluations of the continuous opacity monitoring system with quarterly performance audits and annual zero alignments in accordance with 40 CFR 60 Appendix F, Procedure 3. For the performance evaluation, conformance with the specification for calibration error, Section 13.3 Field Audit Performance Specifications, Paragraph (2) Calibration Error of 40 CFR 60, Appendix B, Performance Specification 1 must be demonstrated. Quarterly assessments may be reduced in frequency to semi-annual with four consecutive quarters of quality-assured data (40 CFR 60 Appendix F, Procedure 3, Section 2.0)

c) When a failure of the opacity monitor occurs, an alternative method, acceptable to the Department, for measuring or estimating the opacity must be undertaken as soon as possible. Timely repair of the emission monitoring system must be made.

d) The Department may require additional audits of the opacity monitor.

5) Once per week in which the emission unit is operated, a company representative shall observe the emission point. If no visible emissions are observed, the date and time shall be recorded.

If visible emissions are observed, the permittee must investigate the problem within eight hours. Any problems that are discovered must be corrected as soon as possible. If correcting the problem is expected to take longer than 24 hours, the permittee shall follow procedures as outlined in Condition 8.G. Following appropriate corrective action, an EPA Reference Method 9 shall be made to confirm the reestablishment of compliance with the emission limit.

All investigations of malfunctions and visible emissions shall be recorded. The permittee shall comply with the applicable visible emissions and particulate emission limits in Condition No. 3 (emission unit limits) and nothing in this condition shall be construed as authorizing otherwise.

6) To verify the SO_2 emissions calculation formula for coal listed in Condition 4.B.1, stack testing shall be conducted within two years of issuance of a renewal permit on emission unit EU 3 (pulp dryer). Any actual emission deviation shall be accounted for in the SO_2 emission formula in Condition 4.B.1. More frequent testing may be conducted by the permittee to modify the equation with the Department's prior approval.

7) At least once per month when biogas is being combusted in the biogas flare (EU 13), the biogas hydrogen sulfide concentration (ppm) by volume shall be measured and recorded.

8) By the 15th day of each month, the permittee shall calculate and record the sulfur dioxide emissions for the previous month and for the previous 12-month period (12-month rolling total) from the biogas flare (EU 13) using the following equation.

SO_2 emissions (12-month rolling total) = (%H_2S) x (0.16GF) x (1 ton/2000 lb)

Where:

%H_2S = decimal fraction of H_2S in biogas recorded during previous month (by volume)

GF = total gas flared in cubic feet during previous 12-months

0.16 lb/scf = (1 lb-mole/392 scf) x (64.1 lb SO_2/lb-mole)

a) If the SO_2 emissions exceed 50.26 tons in any 12-month rolling period, the Department shall be notified by the 25th day of the month in which the calculation was made.

9) For purposes of compliance monitoring, burning of biogas shall be considered credible evidence of compliance with the applicable opacity standard. However, results from 40

CFR 60, Appendix A, Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources will take precedence over burning of biogas for evidence of compliance or noncompliance with the applicable opacity standard in the event of enforcement action.

10) A log shall be kept of the total hours of operation on a calendar year basis for engines. Records shall be maintained to differentiate annual emergency vs. non-emergency/maintenance/etc. hours of operation.

11) The permittee shall conduct the monitoring, recordkeeping and reporting as required by the applicable subparts of 40 CFR 64 and shall be conducted in accordance with the Compliance Assurance Monitoring (CAM) Plan in Attachment A of this permit. The measured indicator ranges for emission units subject to CAM are as follows:

Indicator Ranges

Emission Unit Description	EU/EP	Control Equipment/ Pollutant Monitored	Indicator Range (s)
Boiler 1 & 2	1/1 & 2/2	ESP/PM, PM_{10}	>6% opacity (3-hr avg.: Investigate) >9% opacity (3-hr avg.: Excursion) (Frequency: continuous by opacity monitor, 24-hr avg.)
Pulp dryer	3/3A	Two cyclones followed by a wet scrubber/PM, PM_{10} & opacity	Cyclone: Pressure drop of 3.0-6.0 inches of water (Frequency: continuous, 1-hr avg.) Wet Scrubber: Water flow rate of ≥4,000 gpm (Frequency: continuous, 1-hr avg.)
Sugar dryer/cooler	5/5	Baghouse/PM, PM_{10} & opacity	No visible emissions (Frequency: daily)
Pellet mill area	9/9	Two baghouses/PM, PM_{10} & opacity	No visible emissions (Frequency: daily)
Sugar screen/ scale/conveyors	10/10	Baghouse/PM, PM_{10} & opacity	No visible emissions (Frequency: daily)
Pulp pellet loadout	22/22	Baghouse/PM, PM_{10} & opacity	No visible emissions (Frequency: daily)

12) The permittee shall continuously monitor the water flow rate of the gas washer venturi scrubber during operation of the lime kiln (EU 11). The calculated one-hour average water flow rate shall be maintained at greater than 30 gallons per minute to assure compliance with the applicable particulate matter and opacity standards. The permittee may elect to perform additional testing to reestablish the flow rate. Routine observations and maintenance shall be performed on the kiln.

13) Conduct all applicable performance tests according to 40 CFR 63, Subpart DDDDD §63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of §63.7515. Annual performance tests to demonstrate compliance with the filterable PM

(or TSM), CO, Hg and HCl must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of §63.7515.

14) Demonstrate continuous compliance with 40 CFR 63, Subpart 5D emission limitations, fuel specifications, monitoring and work practice standards in accordance with NDAC 33.1-15-22-03, Subpart 5D.

a) For the boilers subject to a CO emission limit (EU 1 and EU 2) that demonstrate compliance with an O_2 analyzer system as specified in §63.7525(a), maintain the 30-day rolling average oxygen content at or above the lowest hourly average oxygen concentration measured during the CO performance test, as specified in table 8.

15) The manufacturer's recommended operations and maintenance (O&M) procedures, or a site-specific O&M procedure (developed from the manufacturer's recommended O&M procedures), shall be followed to assure proper operation of the emission unit. The permittee shall have the O&M procedures available on-site and provide the Department with a copy when requested.

16) Compliance with SO_2 and VOC emission limitations for the lime kiln (EU 11) is demonstrated through worst-case potential emission calculations and margin of compliance with applicable limits. The Permittee shall maintain proper operation of inherent process controls as required for other emission limits, follow good combustion practices, and not alter kiln design or fuel combustion parameters.

17) For purposes of compliance monitoring, burning of fuel in compliance with Condition 2.B.3 shall be considered credible evidence of compliance with any applicable NO_x and opacity emission limit. However, results from tests conducted in accordance with the test methods in 40 CFR 50, 51, 60, 61, or 75 will take precedence over the burning of fuel as outline in Condition 2.B.3 for evidence of compliance or noncompliance with any applicable NO_x and opacity limit, in the event of enforcement action.

5. **Recordkeeping Requirements**:

A. The permittee shall maintain compliance monitoring records as outlined in the Monitoring Records table that include the following information.

1) The date, place (as defined in the permit) and time of sampling or measurement.

2) The date(s) testing was performed.

3) The company, entity, or person that performed the testing.

4) The testing techniques or methods used.

5) The results of such testing.

6) The operating conditions that existed at the time of sampling or measurement.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(3)(b)[1]

Monitoring Records

Emission Unit Description	EU	Pollutant/ Parameter	Compliance Monitoring Record
Foster-Wheeler boilers No. 1 and No. 2	1 & 2	Filterable PM (or TSM)	Emissions Test Data
		PM/PM_{10}	CAM Data
		SO_2	CEMS/CERMS Data
		NO_x	CEMS/CERMS Data
		CO	Emissions Test Data & O&M Data
		Hg	Emissions Test Data
		HCl	Emissions Test Data
		Opacity	COMS Data
Promill pulp dryer	3	PM/PM_{10}/Opacity	Emissions Test Data & CAM Data
		SO_2	Sulfur analysis & SO_2 calculations (based on stack testing required by Condition 4.B.6)
		NO_x	Emissions Test Data
		CO	Emissions Test Data
		VOC	Emissions Test Data
Sugar dryer/cooler	5	PM/PM_{10}/Opacity	CAM Data
Pellet mills, pellet cooler, dry pulp & pellet equip.	7, 8 & 9	PM/PM_{10}/Opacity	Visible Emissions Observations (VEO) Data (EU 7 & EU 8) CAM Data (EU 9)
Sugar screen/scale/conveyors	10	PM/PM_{10}/Opacity	CAM Data

Emission Unit Description	EU	Pollutant/ Parameter	Compliance Monitoring Record
Lime kiln	11	$PM/PM_{10}/PM_{2.5}$/Opacity	Emissions Test Data & Water Flow Rate Data
		SO_2	O&M Data & Equipment Design
		NO_x	Emissions Test Data
		CO	Emissions Test Data
		VOC	O&M Data & Equipment Design
Lime slaker	12	$PM/PM_{10}/PM_{2.5}$/Opacity	Emissions Test Data & VEO Data
Biogas flare	13	H_2S	Gas Analysis Data
		SO_2	Emissions Calculation Data
		Opacity	Type of Fuel Usage
Pellet bins	15	PM/PM_{10}/Opacity	VEO Data
Diesel emergency fire pump engine	21	NO_x/Opacity	Type of Fuel Usage
		Operating Hours	Hours of Operation Data
Pulp pellet loadout	22	PM/ PM_{10}/Opacity	CAM Data

B. In addition to requirements outlined in Condition 5.A, recordkeeping for EU 1, 2, 3, 5, 9, 10 and 22 shall be in accordance with the following applicable requirements of the North Dakota Air Pollution Control Rules (NDAC) 33.1-15-06, 33.1-15-12, 33.1-15-14-06.10 and 33.1-15-22, as applicable:

1) NDAC 33.1-15-06-05, Reporting and Recordkeeping Requirements

2) NDAC 33.1-15-12, Subpart A, §60.7, Notification and Recordkeeping

3) NDAC 33.1-15-12, Subpart Db, §60.49b, Reporting and Recordkeeping Requirements

4) NDAC 33.1-15-14-06.10, CAM, §64.9, Reporting and Recordkeeping Requirements, Paragraph (b) General Recordkeeping Requirements

5) NDAC 33.1-15-22, Subpart A, §63.10, Recordkeeping and Reporting Requirements

6) NDAC 33.1-15-22, Subpart DDDDD, Notification, Reports and Records

Applicable Requirements: NDAC 33.1-15-06, NDAC 33.1-15-12, NDAC 33.1-15-14-06.10 and NDAC 33.1-15-22

C. The permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sampling, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings/computer printouts of continuous monitoring instrumentation, and copies of all reports required by the permit.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(3)(b)[2]

6. **Reporting**:

A. For EU 1, 2, 3, 5, 9, 10 and 22, reporting shall be in accordance with the following requirements of the North Dakota Air Pollution Control Rules (NDAC) 33.1-15-06, 33.1-15-12, 33.1-15-14-06.10 and 33.1-15-22, as applicable:

1) NDAC 33.1-15-06-05, Reporting and Recordkeeping Requirements

2) NDAC 33.1-15-12, Subpart A, §60.7, Notification and Recordkeeping

3) NDAC 33.1-15-12, Subpart Db, §60.49b, Reporting and Recordkeeping Requirements

4) NDAC 33.1-15-14-06.10, CAM, §64.9, Reporting and Recordkeeping Requirements, Paragraph (a) General Reporting Requirements

5) NDAC 33.1-15-22, Subpart A, §63.10, Recordkeeping and Reporting Requirements

6) NDAC 33.1-15-22, Subpart DDDDD, Notification, Reports and Records

7) Quarterly excess emissions reports for EU 1 and EU 2 shall be submitted by the 30th day following the end of each calendar quarter. Excess emissions are defined as emissions which exceed the emission limits for EU 1 and EU 2 as outlined in Condition 3. Excess emissions shall be reported for the following:

Parameter	Reporting Period
SO_2 lb/10^6 Btu	1-hour average
SO_2 lb/hr	1-hour average
NO_x lb/10^6 Btu	30-day rolling average
NO_x lb/hr	30-day rolling average
Opacity %	6-minute average

Applicable Requirements: NDAC 33.1-15-06, NDAC 33.1-15-12, NDAC 33.1-15-14-06.10 and NDAC 33.1-15-22

B. The permittee shall submit a semi-annual monitoring report for all monitoring records required under Condition 5 in a format provided or approved by the Department. All instances of deviations from the permit must be identified in the report. A monitoring report shall be submitted within 45

days after June 30 and December 31 of each year. Semi-annual reporting required by NDAC 33.1-15-22-03, Subpart 5D (§63.7550) shall be included in this report

Applicable Requirements: NDAC 33.1-15-14-06.5.a(3)(c)[1] and [2] and NDAC 33.1-15-22-03, Subpart 5D

C. The permittee shall submit an annual compliance certification report in accordance with NDAC 33.1-15-14-06.5.c(5) within 45 days after December 31 of each year in a format provided or approved by the Department.

Applicable Requirement: NDAC 33.1-15-14-06.5.c(5)

D. For emission units where the method of compliance monitoring is demonstrated by an EPA Test Method or a portable analyzer test, the test report shall be submitted to the Department within 60 days after completion of the test.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(6)(e)

E. The permittee shall submit an annual emission inventory report in a format provided or approved by the Department. This report shall be submitted by March 15 of each year. Insignificant units/activities listed in this permit do not need to be included in the report.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(7) and NDAC 33.1-15-23-04

7. **Facility Wide Operating Conditions**:

A. **Ambient Air Quality Standards**:

1) Particulate and gases. The permittee shall not emit air contaminants in such a manner or amount that would violate the standards of ambient air quality listed in Table 1 of NDAC 33.1-15-02, external to buildings, to which the general public has access.

2) Radioactive substances. The permittee shall not release into the ambient air any radioactive substances exceeding the concentrations specified in NDAC 33.1-10.

3) Other air contaminants. The permittee shall not emit any other air contaminants in concentrations that would be injurious to human health or well-being or unreasonably interfere with the enjoyment of property or that would injure plant or animal life.

4) Disclaimer. Nothing in any other part or section of this permit may in any manner be construed as authorizing or legalizing the emission of air contaminants in such manner that would violate the standards in Paragraphs 1), 2) and 3) of this condition.

Applicable Requirements: NDAC 33.1-15-02-04 and 40 CFR 50.1(e)

B. **Fugitive Emissions**: The release of fugitive emissions shall comply with the applicable requirements in NDAC 33.1-15-17.

Applicable Requirement: NDAC 33.1-15-17

C. **Open Burning**: The permittee may not cause, conduct, or permit open burning of refuse, trade waste, or other combustible material, except as provided for in Section 33.1-15-04-02 and may not conduct, cause, or permit the conduct of a salvage operation by open burning. Any permissible open burning under NDAC 33.1-15-04-02 must comply with the requirements of that section.

Applicable Requirement: NDAC 33.1-15-04

D. **Asbestos Renovation or Demolition**: Any asbestos renovation or demolition at the facility shall comply with emission standard for asbestos in NDAC 33.1-15-13.

Applicable Requirement: NDAC 33.1-15-13-02

E. **Requirements for Organic Compounds Gas Disposal**

1) Any organic compounds, gases and vapors which are generated as wastes as the result of storage, refining or processing operations and which contain hydrogen sulfide shall be incinerated, flared or treated in an equally effective manner before being released into the ambient air.

2) Each flare must be equipped and operated with an automatic ignitor or a continuous burning pilot.

Applicable Requirement: NDAC 33.1-15-07-02

F. **Rotating Pumps and Compressors**: All rotating pumps and compressors handling volatile organic compounds must be equipped and operated with properly maintained seals designed for their specific product service and operating conditions.

Applicable Requirement: NDAC 33.1-15-07-01.5

G. **Shutdowns/Malfunction/Continuous Emission Monitoring System Failure**:

1) Maintenance Shutdowns. In the case of shutdown of air pollution control equipment for necessary scheduled maintenance, the intent to shut down such equipment shall be reported to the Department at least 24 hours prior to the planned shutdown provided that the air contaminating source will be operated while the control equipment is not in service. Such prior notice shall include the following:

a) Identification of the specific facility to be taken out of service as well as its location and permit number.

b) The expected length of time that the air pollution control equipment will be out of service.

c) The nature and estimated quantity of emissions of air pollutants likely to be emitted during the shutdown period.

d) Measures, such as the use of off-shift labor and equipment, that will be taken to minimize the length of the shutdown period.

e) The reasons that it would be impossible or impractical to shut down the source operation during the maintenance period.

f) Nothing in this subsection shall in any manner be construed as authorizing or legalizing the emission of air contaminants in excess of the rate allowed by this article or a permit issued pursuant to this article.

Applicable Requirement: NDAC 33.1-15-01-13.1

2) Malfunctions.

a) When a malfunction in any installation occurs that can be expected to last longer than 24 hours and cause the emission of air contaminants in violation of this article or other applicable rules and regulations, the person responsible for such installation shall notify the Department of such malfunction as soon as possible during normal working hours. The notification must contain a statement giving all pertinent facts, including the estimated duration of the breakdown. The Department shall be notified when the condition causing the malfunction has been corrected.

b) Immediate notification to the Department is required for any malfunction that would threaten health or welfare or pose an imminent danger. During normal working hours the Department can be contacted at 701-328-5188. After hours the Department can be contacted through the 24-hour state radio emergency number 1-800-472-2121. If calling from out of state, the 24-hour number is 701-328-9921.

c) Unavoidable Malfunction. The owner or operator of a source who believes any excess emissions resulted from an unavoidable malfunction shall submit a written report to the Department which includes evidence that:

[1] The excess emissions were caused by a sudden, unavoidable breakdown of technology that was beyond the reasonable control of the owner or operator.

[2] The excess emissions could not have been avoided by better operation and maintenance, did not stem from an activity or event that could have been foreseen and avoided, or planned for.

[3] To the extent practicable, the source maintained and operated the air pollution control equipment and process equipment in a manner consistent with good practice for minimizing emissions, including minimizing any bypass emissions.

[4] Any necessary repairs were made as quickly as practicable, using off-shift labor and overtime as needed and possible.

[5] All practicable steps were taken to minimize the potential impact of the excess emissions on ambient air quality.

[6] The excess emissions are not part of a recurring pattern that may have been caused by inadequate operation or maintenance, or inadequate design of the malfunctioning equipment.

The report shall be submitted within 30 days of the end of the calendar quarter in which the malfunction occurred or within 30 days of a written request by the Department, whichever is sooner.

The burden of proof is on the owner or operator of the source to provide sufficient information to demonstrate that an unavoidable equipment malfunction occurred. The Department may elect not to pursue enforcement action after considering whether excess emissions resulted from an unavoidable equipment malfunction. The Department will evaluate, on a case-by-case basis, the information submitted by the owner or operator to determine whether to pursue enforcement action.

Applicable Requirement: NDAC 33.1-15-01-13.2

3) Continuous Emission Monitoring System Failures. When a failure of a continuous emission monitoring system occurs, an alternative method for measuring or estimating emissions must be undertaken as soon as possible. The owner or operator of a source that uses an alternative method shall have the burden of demonstrating that the method is accurate. Timely repair of the emission monitoring system must be made. The provisions of this subsection do not apply to sources that are subject to monitoring requirements in Chapter 33.1-15-21 (40 CFR 75, Acid Rain Program).

Applicable Requirement: NDAC 33.1-15-01-13.3

H. **Noncompliance Due to an Emergency**: The permittee may seek to establish that noncompliance with a technology-based emission limitation under this permit was due to an emergency. To do so, the permittee shall demonstrate the affirmative defense of emergency through properly signed, contemporaneous operating logs, or other relevant evidence that:

1) An emergency occurred, and that the permittee can identify the cause(s) of the emergency;

2) The permitted facility was at the time being properly operated;

3) During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit; and

4) The permittee submitted notice of the emergency to the Department within one working day of the time when emission limitations were exceeded longer than 24-hours due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. Those emergencies not reported within one working day, as well as those that were, will be included in the semi-annual report.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

Technology-based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a New Source Performance Standard) rather than those established to attain a health-based air quality standard.

An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of this source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes this source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Applicable Requirement: NDAC 33.1-15-14-06.5.g

I. **Air Pollution from Internal Combustion Engines**: The permittee shall comply with all applicable requirements of NDAC 33.1-15-08-01 – Internal Combustion Engine Emissions Restricted.

Applicable Requirement: NDAC 33.1-15-08-01

J. **Prohibition of Air Pollution**:

1) The permittee shall not permit or cause air pollution, as defined in NDAC 33.1-15-01-04.

2) Nothing in any other part of this permit or any other regulation relating to air pollution shall in any manner be construed as authorizing or legalizing the creation or maintenance of air pollution.

Applicable Requirement: NDAC 33.1-15-01-15

K. **Performance Tests**:

1) The Department may reasonably require the permittee to make or have made tests, at a reasonable time or interval, to determine the emission of air contaminants from any source, for the purpose of determining whether the permittee is in violation of any standard or to satisfy other requirements of NDCC 23.1-06. All tests shall be made, and the results calculated in accordance with test procedures approved or specified by the Department including the North Dakota Department of Environmental Quality Emission Testing Guideline. All tests shall be conducted by reputable, qualified personnel. The Department shall be given a copy of the test results in writing and signed by the person responsible for the tests.

2) The Department may conduct tests of emissions of air contaminants from any source. Upon request of the Department, the permittee shall provide necessary and adequate access into stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants.

Applicable Requirement: NDAC 33.1-15-01-12

3) Except for sources subject to 40 CFR 63, the permittee shall notify the Department by submitting a Proposed Test Plan, or its equivalent, at least 30 calendar days in advance of any tests of emissions of air contaminants required by the Department. The permittee shall notify the Department at least 60 calendar days in advance of any performance testing required under 40 CFR 63, unless otherwise specified by the subpart. If the permittee is unable to conduct the performance test on the scheduled date, the permittee shall notify the Department as soon as practicable when conditions warrant and shall coordinate a new test date with the Department.

Failure to give the proper notification may prevent the Department from observing the test. If the Department is unable to observe the test because of improper notification, the test results may be rejected.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(3)(a), NDAC 33.1-15-12-02 Subpart A (40 CFR 60.8), NDAC 33.1-15-13-01.2 Subpart A (40 CFR 61.13), NDAC 33.1-15-22-03 Subpart A (40 CFR 63.7)

L. **Pesticide Use and Disposal**: Any use of a pesticide or disposal of surplus pesticides and empty pesticide containers shall comply with the requirements in NDAC 33.1-15-10.

Applicable Requirements: NDAC 33.1-15-10-01 and NDAC 33.1-15-10-02

M. **Air Pollution Emergency Episodes**: When an air pollution emergency episode is declared by the Department, the permittee shall comply with the requirements in NDAC 33.1-15-11.

Applicable Requirements: NDAC 33.1-15-11-01 through NDAC 33.1-15-11-04

N. **Stratospheric Ozone Protection**: The permittee shall comply with any applicable standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in Subpart B:

1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to Section 82.156.

2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to Section 82.158.

3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to Section 82.161.

4) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to Section 82.156.

Applicable Requirement: 40 CFR 82

O. **Chemical Accident Prevention**: The permittee shall comply with all applicable requirements of Chemical Accident Prevention pursuant to 40 CFR 68. The permittee shall comply with the requirements of this part no later than the latest of the following dates:

1) Three years after the date on which a regulated substance is first listed under this part; or

2) The date on which a regulated substance is first present above a threshold quantity in a process.

Applicable Requirement: 40 CFR 68

P. **Air Pollution Control Equipment**: The permittee shall maintain and operate air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The manufacturer's recommended Operations and Maintenance (O&M) procedures, or a site-specific O&M procedure developed from the manufacturer's recommended O&M procedures, shall be followed to assure proper operation and maintenance of the equipment. The permittee shall have the O&M procedures available onsite and provide the Department with a copy when requested.

Applicable Requirement: NDAC 33.1-15-14-06.5.b(1)

Q. **Prevention of Significant Deterioration of Air Quality** (40 CFR 52.21 as incorporated by NDAC Chapter 33.1-15-15): If this facility is classified as a major stationary source under the Prevention of Significant Deterioration of Air Quality (PSD) rules, a Permit to Construct must be obtained from the Department for any project which meets the definition of a "major modification" under 40 CFR 52.21(b)(2).

If this facility is classified as a major stationary source under the PSD rules and the permittee elects to use the method specified in 40 CFR 52.21(b)(41)(ii)(a) through (c) for calculating the projected actual emissions of a proposed project, then the permittee shall comply with all applicable requirements of 40 CFR 52.21(r)(6).

Applicable Requirement: NDAC 33.1-15-15-01.2

8. **General Conditions**:

A. **Annual Fee Payment**: The permittee shall pay an annual fee, for administering and monitoring compliance, which is determined by the actual annual emissions of regulated contaminants from the previous calendar year. The Department will send a notice, identifying the amount of the annual permit fee, to the permittee of each affected installation. The fee is due within 60 days following the date of such notice. Any source that qualifies as a "small business" may petition the Department to reduce or exempt any fee required under this section. Failure to pay the fee in a timely manner or submit a certification for exemption may cause this Department to initiate action to revoke the permit.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(7) and NDAC 33.1-15-23-04

B. **Permit Renewal and Expiration**: This permit shall be effective from the date of its issuance for a fixed period of five years. The permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least six months, but no more than 18 months, prior to the date of permit expiration. The Department shall approve or disapprove the renewal application within 60 days of receipt. Unless the Department requests additional information or otherwise notifies the applicant of incompleteness, the application shall be deemed complete. For timely and complete renewal applications for which the Department has failed to issue or deny the renewal permit before the expiration date of the previous permit, all terms and conditions of the permit, including any permit shield previously granted shall remain in effect until the renewal permit has been issued or denied. The application for renewal shall include the current permit number, description of any permit revisions and off-permit changes that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term.

Applicable Requirements: NDAC 33.1-15-14-06.4 and NDAC 33.1-15-14-06.6

C. **Transfer of Ownership or Operation**: This permit may not be transferred except by procedures allowed in Chapter 33.1-15-14 and is to be returned to the Department upon the destruction or change of ownership of the source unit(s), or upon expiration, suspension or revocation of this permit. A change in ownership or operational control of a source is treated as an administrative permit amendment if no other change in the permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee has been submitted to the Department.

Applicable Requirement: NDAC 33.1-15-14-06.6.d

D. **Property Rights**: This permit does not convey any property rights of any sort, or any exclusive privilege.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(6)(d)

E. **Submissions**:

1) Reports, test data, monitoring data, notifications, and requests for renewal shall be submitted to the Department using a format provided or approved by the Department. Physical submittals shall be submitted to:

North Dakota Department of Environmental Quality
Division of Air Quality
4201 Normandy Street, 2nd Floor
Bismarck, ND 58503-1324

2) Any application form, report or compliance certification submitted shall be certified as being true, accurate, and complete by a responsible official.

Applicable Requirement: NDAC 33.1-15-14-06.4.d

F. **Right of Entry**: Any duly authorized officer, employee or agent of the North Dakota Department of Environmental Quality may enter and inspect any property, premise or place listed on this permit or where records are kept concerning this permit at any reasonable time for the purpose of ascertaining the state of compliance with this permit and the North Dakota Air Pollution Control Rules. The Department may conduct tests and take samples of air contaminants, fuel, processing material, and other materials which affect or may affect emissions of air contaminants from any source. The Department shall have the right to access and copy any records required by the Department's rules and to inspect monitoring equipment located on the premises.

Applicable Requirements: NDAC 33.1-15-14-06.5.c(2) and NDAC 33.1-15-01-06

G. **Compliance**: The permittee must comply with all conditions of this permit. Any noncompliance with a federally-enforceable permit condition constitutes a violation of the Federal Clean Air Act. Any noncompliance with any State enforceable condition of this permit constitutes a violation of NDCC Chapter 23.1-06 and NDAC 33.1-15. Violation of any condition of this permit is grounds for enforcement action, for permit termination, revocation and reissuance or modification, or for denial of a permit renewal application. Noncompliance may also be grounds for assessment of penalties under the NDCC 23.1-06. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(6)(a) and NDAC 33.1-15-14-06.5.a(6)(b)

H. **Duty to Provide Information**: The permittee shall furnish to the Department, within a reasonable time, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance

with the permit. This includes instances where an alteration, repair, expansion, or change in method of operation of the source occurs. Upon request, the permittee shall also furnish to the Department copies of records that the permittee is required to keep by this permit, or for information claimed to be confidential, the permittee may furnish such recourse directly to the Department along with a claim of confidentiality. The permittee, upon becoming aware that any relevant facts were omitted, or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. Items that warrant supplemental information submittal include, but are not limited to, changes in the ambient air boundary and changes in parameters associated with emission points (i.e., stack parameters). The permittee shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

Applicable Requirements: NDAC 33.1-15-14-06.5.a(6)(e), NDAC 33.1-15-14-06.6.b(3) and NDAC 33.1-15-14-06.4.b

I. **Reopening for Cause**: The Department will reopen and revise this permit as necessary to remedy deficiencies in the following circumstances:

1) Additional applicable requirements under the Federal Clean Air Act become applicable to the permittee with a remaining permit term of three or more years. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.

2) The Department or the United States Environmental Protection Agency determines that this permit contains a material mistake or inaccurate statements were made in establishing the emissions standards or other terms or conditions of this permit.

3) The Department or the United States Environmental Protection Agency determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

4) Reopenings shall not be initiated before a notice of intent to reopen is provided to the permittee by the Department at least 30 days in advance of the date that this permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency. Proceedings to reopen and issue this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening shall be made as expeditiously as practicable.

Applicable Requirement: NDAC 33.1-15-14-06.6.f

J. **Permit Changes**: The permit may be modified, revoked, reopened, and reissued or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and

reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(6)(c)

K. **Off-Permit Changes**: A permit revision is not required for changes that are not addressed or prohibited by this permit, provided the following conditions are met:

1) No such change may violate any term or condition of this permit.

2) Each change must comply with all applicable requirements.

3) Changes under this provision may not include changes or activities subject to any requirement under Title IV or that are modifications under any provision of Title I of the Federal Clean Air Act.

4) A Permit to Construct under NDAC 33.1-15-14-02 has been issued, if required.

5) Before the permit change is made, the permittee must provide written notice to both the Department and Air Program (8P-AR), Office of Partnerships & Regulatory Assistance, US EPA Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129, except for changes that qualify as insignificant activities in Section 33.1-15-14-06. This notice shall describe each change, the date of the change, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result.

6) The permittee shall record all changes that result in emissions of any regulated air pollutant subject to any applicable requirement not otherwise regulated under this permit, and the emissions resulting from those changes. The record shall reside at the permittee's facility.

Applicable Requirement: NDAC 33.1-15-14-06.6.b(3)

L. **Administrative Permit Amendments**: This permit may be revised through an administrative permit amendment, if the revision to this permit accomplishes one of the following:

1) Corrects typographical errors.

2) Identifies a change in the name, address or phone number of any person identified in this permit or provides a similar minor administrative change at the source.

3) Requires more frequent monitoring or reporting by the permittee.

4) Allows for a change in ownership or operational control of the source where the Department determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the Department.

5) Incorporates into the Title V permit the requirements from a Permit to Construct when the review was substantially equivalent to Title V requirements for permit issuance, renewal, reopenings, revisions and permit review by the United States Environmental Protection Agency and affected state review, that would be applicable to the change if it were subject to review as a permit modification and compliance requirements substantially equivalent to Title V requirements for permit content were contained in the Permit to Construct.

6) Incorporates any other type of change which the Administrator of the United States Environmental Protection Agency has approved as being an administrative permit amendment as part of the Department's approved Title V operating permit program.

Applicable Requirement: NDAC 33.1-15-14-06.6.d

M. **Minor Permit Modification**: This permit may be revised by a minor permit modification, if the proposed permit modification meets the following requirements:

1) Does not violate any applicable requirement.

2) Does not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in this permit.

3) Does not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis.

4) Does not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include a federally enforceable emissions cap assumed to avoid classification as a modification under any provision of Title I of the Federal Clean Air Act; and alternative emissions limit approved pursuant to regulations promulgated under Section 112(i)(5) of the Federal Clean Air Act.

5) Is not a modification under NDAC 33.1-15-12, 33.1-15-13, and 33.1-15-15 or any provision of Title I of the Federal Clean Air Act.

6) Is not required to be processed as a significant modification.

Applicable Requirement: NDAC 33.1-15-14-06.6.e(1)

N. **Significant Modifications**:

1) Significant modification procedures shall be used for applications requesting permit modifications that do not qualify as minor permit modifications or as administrative amendments. Every significant change in existing monitoring permit terms or conditions and every relaxation of reporting or recordkeeping permit terms or conditions shall be

considered significant. Nothing therein shall be construed to preclude the permittee from making changes consistent with this subsection that would render existing permit compliance terms and conditions irrelevant.

2) Significant permit modifications shall meet all Title V requirements, including those for applications, public participation, review by affected states, and review by the United States Environmental Protection Agency, as they apply to permit issuance and permit renewal. The Department shall complete review of significant permit modifications within nine months after receipt of a complete application.

Applicable Requirement: NDAC 33.1-15-14-06.6.e(3)

O. **Operational Flexibility**: The permittee is allowed to make a limited class of changes within the permitted facility that contravene the specific terms of this permit without applying for a permit revision, provided the changes do not exceed the emissions allowable under this permit, are not Title I modifications and a Permit to Construct is not required. This class of changes does not include changes that would violate applicable requirements, or changes to federally-enforceable permit terms or conditions that are monitoring, recordkeeping, reporting, or compliance certification requirements.

The permittee is required to send a notice to both the Department and Air Program (8P-AR), Office of Partnerships & Regulatory Assistance, US EPA Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129, at least seven days in advance of any change made under this provision. The notice must describe the change, when it will occur and any change in emissions, and identify any permit terms or conditions made inapplicable as a result of the change. The permittee shall attach each notice to its copy of this permit. Any permit shield provided in this permit does not apply to changes made under this provision.

Applicable Requirement: NDAC 33.1-15-14-06.6.b(2)

P. **Relationship to Other Requirements**: Nothing in this permit shall alter or affect the following:

1) The provisions of Section 303 of the Federal Clean Air Act (emergency orders), including the authority of the administrator of the United States Environmental Protection Agency under that section.

2) The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

3) The ability of the United States Environmental Protection Agency to obtain information from a source pursuant to Section 114 of the Federal Clean Air Act.

4) Nothing in this permit shall relieve the permittee of the requirement to obtain a Permit to Construct.

Applicable Requirements: NDAC 33.1-15-14-06.3 and NDAC 33.1-15-14-06.5.f(3)(a), (b) and (d)

Q. **Severability Clause**: The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

Applicable Requirement: NDAC 33.1-15-14-06.5.a(5)

R. **Circumvention**: The permittee shall not cause or permit the installation or use of any device of any means which conceals or dilutes an emission of air contaminants which would otherwise violate this permit.

Applicable Requirement: NDAC 33.1-15-01-08

9. **State Enforceable Only Conditions (not Federally enforceable):**

A. **General Odor Restriction**: The permittee shall not discharge into the ambient air any objectionable odorous air contaminant which exceeds the limits established in NDAC 33.1-15-16.

Applicable Requirement: NDAC 33.1-15-16

B. **Hydrogen Sulfide Restriction**: The permittee shall not discharge into the ambient air hydrogen sulfide (H_2S) in concentrations that would be objectionable on land owned or leased by the complainant or in areas normally accessed by the general public. For the purpose of complaint resolution, two samples with concentrations greater than 0.05 parts per million (50 parts per billion) sampled at least 15 minutes apart within a two-hour period and measured in accordance with Section 33.1-15-16-04 constitute a violation.

Applicable Requirement: NDAC 33.1-15-16-04

Attachment A

American Crystal Sugar Company, Hillsboro Plant
PTO No. AOP-28455

Compliance Assurance Monitoring (CAM) Plan
for

EU 1, 2, 3, 4, 5, 6, 9, 10 & 22

Compliance Assurance Monitoring (CAM) Plan

Hillsboro Sugar Beet Processing Plant
Hillsboro, Traill County, North Dakota

Submitted by:

American Crystal Sugar Company

Submitted to:

North Dakota Department of Environmental Quality

Revised: March 8, 2022 (by gjr)

Table of Contents

Compliance Assurance Monitoring (CAM) Plan
Hillsboro Sugar Beet Processing Plant
Hillsboro, Traill County, North Dakota

1.0 Background

Compliance Assurance Monitoring (CAM) is required for affected sources under 40 CFR 64. A CAM plan detailing the applicability and proposed monitoring approach of affected sources is required to be included as part of the 40 CFR 70 (Title V) operating permit renewal process. The American Crystal Sugar Company, Hillsboro Sugar Beet Processing Plant located in Hillsboro, North Dakota, operates under Air Pollution Control Title V Permit to Operate No. AOP-28455.

The following bullet items identify the applicability requirements for CAM as applied to individual emission units at a facility.

- Emission unit is located at a major source that is required to obtain a Title V permit;
- Emission unit is subject to emission limitation or standard for an applicable pollutant;
- Emission unit uses a control device to achieve compliance with the emission limitation;
- Potential pre-control emissions of applicable pollutants (with limits) from the emission unit are at least 100 percent of major source amount (100 tons per year); and,
- Emission unit is not otherwise exempt and does not use a Continuous Emission Monitor (CEM) for the applicable pollutant.

2.0 Applicability

Permitted emission units at the Hillsboro Sugar Beet Processing Plant were evaluated to determine which emission units have specific emission limitations and are equipped with control devices to maintain compliance with the emission limitations. Pre-control potential emissions were estimated for those emission units that were determined to have both an emission limitation and associated control equipment in order to determine if the uncontrolled emissions were greater than 100 percent of the major source amount. The pre-control potential emissions were "back-calculated" using the specific pollutant emission limitation in conjunction with the control equipment efficiency stated in the original Title V permit application for the facility.

Based on the CAM applicability calculations, the following emission sources and associated control equipment types were determined necessary to be included in the CAM plan.

Table 1. Emission Units Subject to CAM Requirements.

Emission Unit I.D.	Emission Point Number	Emission Unit	Control Equipment
1	1	Boiler 1	Electrostatic Precipitator
2	2	Boiler 2	Electrostatic Precipitator
3	3A	Pulp Dryer	Two cyclones in parallel followed by wet scrubber
5	5	Sugar Dryer/Cooler	Baghouse
9	9	Pellet Mill Area	Two Baghouses
10	10	Sugar Screen/Scale/Conveyors	Baghouse
22	22	Pulp Pellet Loadout	Baghouse

As indicated in Table 1, four different control equipment technologies were identified as necessary to include in the CAM plan: baghouse, cyclone, wet scrubber and electrostatic precipitator. The following sections are organized by control technology type and detail the various monitoring approaches and justifications for each control technology type.

3.0 Baghouse

The Hillsboro Sugar Beet Processing Plant uses baghouses, or fabric filter technology, to collect particulate matter (PM_{10}) generated from material handling operations for the Sugar Cooler (4), Sugar Dryer (5), Sugar Screen/Scale/Conveyor (6), Pellet Mill Area (9) and Pulp Pellet Loadout (22). Dust laden air is drawn through the fabric filters to capture particles entrained in the air. The fabric filter provides filtration as well as acting as a support for the formation and accumulation of a filter cake that provides for very high efficiency filtration.

As the particulate matter accumulates on the filter media and the filter cake is formed, the pressure drop across the fabric filter increases. Although the filter cake increases collection efficiency, it also restricts the airflow and increases energy requirements. For proper continuous operation of the fabric filter, the filter media must be periodically cleaned or replaced. Because these emission units operate at or near ambient temperatures, monitoring airflow temperature is not necessary.

3.1 Monitoring Approach

Table 2 summarizes the monitoring approach for the baghouse control devices associated with emission units 5, 9, 10 and 22.

Table 2. Emission Units 5, 9, 10 and 22 Baghouse Monitoring Approach.

I. Indicators	Indicator No. 1 Visible Emissions	Indicator No. 2 Inspection/Maintenance
A. Measurement Approach	When the emission unit is operated, a company representative shall observe the emission point.	Performance is monitored by observing equipment condition.
II. Indicator Range	Visible emissions are observed.	Routine inspections are performed by personnel.
III. Performance Criteria	If visible emissions are observed, the problem must be investigated within eight hours. Corrective action shall be taken according to the manufacturer's specifications and the equipment Operation and Maintenance Manual.	If inspections reveal repair work is needed, maintenance activities are initiated.
A. Representativeness	The presence of visible emissions is directly related to equipment performance and constitutes an excursion.	NA
B. Monitoring Frequency	Visible emissions are observed once per 24-hr period when the emission unit is operating.	Routine observations and maintenance.
C. QA/QC Practices	Following any corrective action, a visible emissions observation shall be made to confirm the absence of any visible emissions.	Personnel perform inspections/maintenance.
D. Data Collection	Observation date and time, as well as corrective actions taken, will be manually recorded. Maintain records.	Maintain records of all maintenance activities performed.
E. Averaging Period	NA	NA

3.2 Justification

The first indicator used to monitor baghouse operation is visible emissions. When the emission unit is operating, routine weekly observations of visible emissions are performed and recorded by plant personnel to monitor bag performance. The presence of visible emissions is directly related to equipment performance and constitutes an excursion. Visible emissions may signal equipment malfunction or bag failure. Maintenance activities may also cause brief periods of visible emissions. Observed visible emissions will be documented and reported, and corrective action will be initiated if necessary.

The second indicator used to monitor baghouse operation is inspection and maintenance. Baghouse performance is monitored by routine inspections of equipment performed by plant personnel. All excursions and maintenance activities will be documented and reported in a maintenance log.

Compliance testing is not required to establish a visible emission range to avoid potential emissions exceedences. Visible emission monitoring as specified by the operating permit is adequate to have a reasonable assurance of compliance and to ensure that the baghouse continues to operate properly and achieve the desired control efficiency.

4.0 Cyclone

The Hillsboro Sugar Beet Processing Plant uses cyclones, or centrifugal collector, to aid in control of particulate emissions from the pulp dryer (3A) operations. Air used to dry the pulp is circulated through the cyclones to remove particulate matter prior to entry to the wet scrubber for final particulate control and venting to the atmosphere.

The process air stream enters near the top of the cyclone and is forced into a downward spiral because of the cyclone's shape and turning vanes. Centrifugal forces and inertia cause the particles to move outward, collide with the outer wall, and then slide downward to the bottom of the cyclone. Near the bottom the cyclone, the air reverses its downward spiral and moves upward in a smaller inner spiral. Cleaned air exits from the top and recovered particulate matter exits from the bottom of the cyclone.

4.1 Monitoring Approach

Table 3 summarizes the monitoring approach for the cyclone control devices associated with emission unit 3.

Table 3. Emission Unit 3 Cyclone Monitoring Approach.

I. Indicators	Indicator No. 1 Differential Pressure	Indicator No. 2 Inspection/Maintenance
A. Measurement Approach	Differential pressure across the cyclone is measured continuously using a DP gauge.	Performance is monitored by observing equipment condition.
II. Indicator Range	Pressure drop between 3.0-6.0 inches of water during normal operating conditions.	Routine inspections are performed by personnel.
III. Performance Criteria	If the differential pressure is out of the specified operating range corrective action shall be taken according to the manufacturer's specifications and the equipment Operation and Maintenance Manual.	If inspections reveal repair work is needed, maintenance activities are initiated.
A. Representativeness	The DP gauge was installed at a representative location.	NA
B. Monitoring Frequency	Continuous during operation, alarm in control room as a result of excursion.	Routine observations and maintenance.
C. QA/QC Practices	Annual calibration of DP gauge.	Personnel perform inspections/maintenance.
D. Data Collection	Automated plant environmental reporting system in conjunction with PIMS.	Maintain records of all maintenance activities performed.
E. Averaging Period	Continuous monitoring data logged as 1-hour average.	NA

4.2 Justification

The first indicator used to monitor cyclone operation is differential pressure (DP) monitoring. A DP gauge is used for measurement at each cyclone. DP monitoring is continuous during operation of the cyclone and logged as a 1-hour average. DP excursions result in a system alarm. Excessive DP may indicate an accumulation of particulate matter within the system or other blockage that inhibits control efficiency of the cyclone. Observed visible emissions will be documented and reported, and corrective action will be initiated if necessary.

The second indicator used to monitor cyclone operation is inspection and maintenance. Cyclone performance is monitored by routine inspections of equipment performed by plant personnel. All excursions and maintenance activities will be documented and reported in a maintenance log.

The cyclone has no moving parts. As described previously the shape of the device promotes a spiral airflow, which causes product pellets in the air stream to collide with the sides of the device through centrifugal force and inertia. Proper maintenance of the cyclone as specified by the manufacturer to maintain the physical integrity of the device ensures proper operation and maximum product recovery. An emissions test shall be conducted once during the term of the permit to measure particulate emissions, using EPA Test Methods in 40 CFR 60, Appendix A. The results of the tests shall be used to demonstrate compliance with the emission units and ensure proper operation of control equipment.

5.0 Scrubber

The Hillsboro Sugar Beet Processing Plant uses a wet scrubber as a final PM_{10} control device for emissions generated from pulp dryer (3A) operations. Dust laden air exiting the cyclones passes through the scrubber spray chamber where inertial impaction of particles on the surface of liquid droplets results in the removal of particles in the air stream.

5.1 Monitoring Approach

Table 4 summarizes the monitoring approach for the scrubber control device associated with emission unit 3A.

Table 4. Emission Unit 3 Scrubber Monitoring Approach.

I. Indicators	Indicator No. 1 Water Flowrate	Indicator No. 2 Inspection/Maintenance
A. Measurement Approach	Scrubber is equipped with a flow meter to continuously monitor operations to provide adequate flow.	Performance is monitored by observing equipment condition.

II. Indicator Range	Water flowrate ≥ 4,000 gpm	Routine inspections are performed by personnel.
III. Performance Criteria	If the flowrate is less than the specified indicator range corrective action shall be taken according to the manufacturer's specifications and the equipment Operation and Maintenance Manual.	If inspections reveal repair work is needed, maintenance activities are initiated.
A. Representativeness	Flow meter is installed at a representative location.	NA
B. Monitoring Frequency	Continuous during operation, alarm in control room as a result of excursion.	Routine observations and maintenance.
C. QA/QC Practices	Annual calibration of flow meter.	Personnel perform inspections/maintenance.
D. Data Collection	Automated plant environmental reporting system in conjunction with PIMS.	Maintain records of all maintenance activities performed.
E. Averaging Period	Continuous monitoring data logged as 1-hour average.	NA

5.2 Justification

The first indicator used to monitor scrubber operation is water flowrate monitoring. A flow monitor is used for measurement of water supplied to the scrubber. Flow monitoring is continuous during operation of the scrubber and logged as a 1-hour average. Flow excursions result in a system alarm. The provision of adequate water flow assures adequate particulate control efficiency of the scrubber system.

The second indicator used to monitor scrubber operation is inspection and maintenance. Routine observations are performed and recorded by plant personnel to monitor scrubber performance. All excursions and maintenance activities will be documented and reported in a maintenance log.

An emissions test shall be conducted once during the term of the permit to measure particulate emissions, using EPA Test Methods in 40 CFR 60, Appendix A. The results of the tests shall be used to demonstrate compliance with the emission units and ensure proper operation of control equipment.

6.0 Electrostatic Precipitator

The Hillsboro Sugar Beet Processing Plant uses electrostatic precipitators (ESP) to remove PM_{10} generated from Boiler 1 (1) and Boiler 2 (2) operations. Dust laden air is ionized as it is drawn between electrodes in the precipitators. Charged particles are collected on oppositely charged plates. For proper continuous operation of the precipitators, the particulate must be knocked off the charged collection plates and removed from the bottom of the ESP.

6.1 Monitoring Approach

Table 5 summarizes the monitoring approach for the electrostatic precipitator control devices associated with emission units 1 and 2.

Table 5. Emission Units 1 and 2 Electrostatic Precipitators Monitoring Approach.

I. Indicators	Indicator No. 1 Stack Opacity	Indicator No. 2 ESP Inspection/Maintenance
A. Measurement Approach	The opacity is measured using a continuous opacity monitoring system (COMS) at the stack of each boiler.	Performance is monitored by observing equipment condition.
II. Indicator Range	An excursion is defined as measured stack opacity greater than 9% for either boiler based on a 3-hour block average. Excursions trigger a reporting requirement. Investigate cause and take necessary corrective action if measured stack opacity exceeds 6.0% for a 3-hour block average.	ESP inspections will be performed by personnel.
III. Performance Criteria		
A. Data Representativeness	Opacity is related to particulate emissions. As opacity increases it can be assumed that particulate emissions increase.	NA
B. Monitoring Frequency	Continuous	Routine observations and maintenance of ESP.
C. QA/QC Practices	Daily zero and span calibration checks of COMS, cleaning of optical surfaces, QA/QC checks per plan. Annual opacity	Personnel perform routine inspections/maintenance. Inspect ESP as needed

	monitor certification, periodic off-stack calibrations. ESP inspections as needed.	
D. Data Collection	Opacity measurements exceeding 6.0% or 9.0% on 3-hour block average will be recorded manually by date and time, and corrective action will be taken. Records are maintained.	Maintain records of all maintenance activities that are performed on ESP.
E. Averaging Period	The COMS records a 1-minute opacity average which is averaged for both a 6-minute and 1-hour average.	NA

6.2 Justification

The first indicator used to monitor ESP operation is stack opacity. When the emission unit is operating, daily COMS transmissometer readings of stack opacity are observed by plant control room personnel to monitor ESP performance. When the stack opacity exceeds 6.0% for a 3-hour block average, action investigate the cause; whether the COMS is recording inaccurate data, or whether the ESP is not operating efficiently; corrective action is taken as appropriate. A stack opacity equal to or exceeding 9.0% for a 3-hour block average is considered an excursion, which must be reported, and corrective action shall be initiated. The level of opacity is a surrogate to the performance of pollution control equipment and may signal equipment malfunctions.

Once corrective actions have been taken, transmissometer readings will be evaluated to determine if the stack opacity has returned to an acceptable level less than 6.0%; if not, continual investigation must occur to resolve the problem.

Periodic performance evaluations of the COMS shall be performed to determine conformance with the specification for calibration error (40 CFR 60, Appendix B, Specification 1) to comply with a permit requirement. The first performance evaluation shall take place within one year after permit issuance. The second performance evaluation shall take place no sooner than two years or later than three years from the date of the first performance evaluation.

The second indicator used to monitor ESP operation is inspection and maintenance. ESP performance is monitored by routine inspections of equipment performed by plant personnel. All excursions and maintenance activities will be documented and recorded in a maintenance log.

Particulate emission tests were conducted to validate the selection of the monitoring approach and the indicator range. The objective of testing was to determine the opacity/mass emission relationship and to demonstrate that monitoring of opacity would provide a reasonable assurance of compliance with PM_{10} emission limitations. The tests conducted on October 21 and 22, 2009 included the determination of the PM_{10} emissions from Boiler No. 2 at three different levels of ESP performance. The results of testing are shown in Table 6 below for the average of 3 runs at each condition.

Table 6. PM_{10} Emissions and Stack Opacity Correlation Summary

Condition	Stack Opacity (%)	PM_{10} Emissions (lb/hr)
ESP Normal	1.1	1.24
ESP Detuned	6.8	7.48
ESP Detuned	14.2	20.02

Using the emission rates for each of nine runs reported by the testing firm, and using the corresponding opacity values recorded by the COMS, a PM_{10} v.s. opacity correlation curve was constructed by plotting PM_{10} on the vertical "y" axis, and opacity on the horizontal "x" axis using linear regression methodology. The curve is expressed by the formula: $y = 1.4295x - 0.9761$. By substituting 11.85 lb/hr PM_{10} for the value of "y" in the formula and solving for "x" which represents opacity, an opacity value of 8.97% is the result. In conclusion, a surrogate opacity value of 9.0% corresponds to the PM_{10} limit of 11.85 lb/hr.

Two trigger points will be set under CAM. The first trigger point is 6.0% opacity for a 3-hour block average which indicates a possible problem with the COMS or the ESP; whereby investigation should be taken. The second trigger point is 9.0% opacity over a 3-hour block average and constitutes an excursion which is a reportable event under CAM. Corrective action must be taken to restore PM_{10} emissions to within the 11.85 lb/hr limit based on surrogate opacity values. Figure 1 is a CAM plan flow chart for the Hillsboro boilers showing corrective action procedures.

American Crystal Sugar Company
Hillsboro Plant
Title V Permit to Operate No. AOP-28455 v5.1
(Previously T5-X75001)
Statement of Basis
(2/2/2022)

Facility Background: The Hillsboro plant is one of six American Crystal Sugar (ACS) Company plants and one of two plants located in North Dakota. Operations at the plant include processing sugarbeets into sugar, the processing of molasses to produce a purified extract, and the pelletization of dried beet pulp for use as animal feed. Through several modifications and upgrades over the years, the facility is capable of processing 10,600 tons of sugar beets per day. The plant consists of two Foster-Wheeler coal-fired spreader stoker boilers, each with a nominal heat input of 237 x 10^6 and a nominal steam load capacity of 175,000 lbs/hr. Boiler No. 1 also combusts biogas.

Control equipment on the boilers consists of two electrostatic precipitators and emissions from each boiler exhaust through a separate flue within a single stack. The facility also includes a Promill coal-fired pulp dryer with a nominal capacity of 110 tons/hr of pressed pulp. The air pollution control equipment for the pulp dryer is two cyclones in parallel, followed by a wet scrubber with exhaust gas recycle. Other sources of emissions from the facility are one coke and anthracite coal-fired lime rock kiln, one lime slaker, numerous storage bins and conveying systems, a pulp pellet load out system, pulp pellet cooler, one sugar dryer/cooler, a biogas flare, and storage stockpiles of raw material. The Hillsboro plant was built in 1974 and Permit to Operate (PTO) No. X75001 was first issued on June 15, 1976.

Chronology (not all-inclusive):

PTO X75001_0_0 issued June 15, 1976.

PTO X75001_1_0 renewed August 15, 1979.

PTO X75001_1_1 revised 12/30/81.

PTO X75001_2_0 renewed August 15, 1982.

1984 installation of sugar dryer and beet pulp pellet cooler did not require a Permit to Construct (PTC); no increase in annual emissions.

PTC 12/6/1985 issued, PSD Major Mod (NOx +440 tpy), replace oil boilers with coal boilers.

PTO X75001_3_0 modified & renewed August 28, 1989.

PTO X75001_4_0 renewed May 23, 1991.

PTO X75001_5_0 renewed June 15, 1994.

PTC 6/4/1993 issued; PSD Major Mod (PM_{10}); install Ion Exclusion Process (never built), molasses storage tanks, and natural gas-fired 201 x 10^6 Btu/hr boiler.

PTC 8/24/1993; install conveyer system, sugar silo, a dust collector system and a vacuum system.

3/24/94, no PTC needed for new pulp press; minimal emissions increase.

PTC 5/11/1995; PSD Major Mod (SO_2, NO_x, PM_{10}, CO); molasses desugarization project.

PTC 6/11/1997; PSD Major Mod (SO_2, NO_x, PM_{10}, CO); plant expansion to increase processing capacity (application amended 5/15/98).

T5-X75001 Initial Issue (AOP-28455 v1.0), issued May 6, 1999.

T5-X75001 Amendment No. 1 (AOP-28455 v1.1), issued 10/13/2000, minor mod (sugar cooler, Rotex sugar screening station, pellet mill areas).

T5-X75001 Amendment No. 2 (AOP-28455 v1.2), issued 1/23/2002, minor mod (biogas flare).

PTC02005, issued 3/21/02, never built (flash calciner, storage silo, product loadout).

T5-X75001 Amendment No. 3 (AOP-28455 v1.3), issued 5/22/2003, minor mod (emergency water pump).

PTC03024 issued 11/25/2003; PSD Major Mod; increased SO_2 1,709 tpy , NO_x 877 tpy, PM_{10} 209 tpy, CO 1,758 tpy, VOC 262 tpy; processing increased by debottlenecking beet juice processing; this was allowed to expire and was reissued as PTC06001 on 3/3/2006.

PTC04016, issued 12/20/2004; PSD Minor Mod (calciner, silo, loadout).

T5-X75001 Renewal No. 1 (AOP-28455 v2.0), issued 3/22/2005.

PTC06001, issued 3/3/2006; PSD Major Mod; increased SO_2 1,709 tpy , NO_x 877 tpy, PM_{10} 209 tpy, CO 1,758 tpy, VOC 262 tpy; processing increased by debottlenecking beet juice processing.

PTC06013, issued 10/31/2006; PSD Major Mod; increased molasses desugarization system utilization and two main boilers steam production; increased SO_2 1,697 tpy , NO_x 652 tpy, PM_{10} 94 tpy, CO 220 tpy, VOC 2 tpy. BACT analysis not required because no emission units were added or modified.

PTC07012 (ACP-17128 v1.0), issued 4/24/2007; PSD Minor Mod (pulp pellet loadout); increases PM 9.4 tpy.

PTC08030 (ACP-17185 v1.0), issued 11/24/2008; PSD Major Mod; installed fourth PKF 140 membrane press, replaced diffuser drive and centrifugals, increased pulp dryer (EU 3) CO limit to 700.0 lb/hr (3-hour average); increased SO_2 1,638 tpy , NO_x 651 tpy, PM 103 tpy, PM_{10} 103 tpy,

CO 181 tpy, Fluorides (as HF) 3.2 tpy. BACT analysis was conducted on the pulp dryer.

PTC08041 (ACP-17196 v1.0), issued 12/12/2008; PSD Minor Mod; replaced pulp pellet loadout baghouse and added two new dust collection systems and baghouses for the pellet and sugar loading areas for safety and general housekeeping, PM and PM_{10} limits added for EU 22, 23 and 24; increased PM 8.5 tpy. BACT analysis not required because significant levels were not reached.

T5-X75001 Renewal No. 2 (AOP-28455 v3.0), issued 5/26/2010.

9/30/2010 Departmental letter of approval for condenser water optimization project, which indirectly slightly increased production; minimal increase in annual emissions (< 2 tpy of any pollutant) and did not require a PTC.

PTC11073 (ACP-17370), issued 10/21/2011; PSD Major Mod; replacement of the lime kiln and lime slaker with no change to emission units but combining emission points 11A-11E into 11A-11C; increased NO_x 32.9 tpy, CO 1,219 tpy. BACT analysis was conducted on the lime kiln and lime slaker. This was withdrawn by the facility and was reissued as PTC13014 (ACP-17511 v1.0), 3/26/2013 with a different sized kiln and combining the emission points into 11A-11D, instead of 11A-11C; increased PM and PM_{10} 35.6 tpy each, $PM_{2.5}$ 21.9 tpy, NO_x 118.2 tpy, SO_2 27.3 tpy, VOC 3.0 tpy, CO 3,307 tpy, CO_{2e} 65,553 tpy. BACT analysis was conducted on the revised lime kiln and lime slaker.

5/19/2014 Departmental letter of approval for the sugar dryer and cooler replacement; did not require a PTC due to a net decrease in emissions.

PTC15036 (ACP-17731 v1.0), issued 6/19/2015; changed the biogas flare emission limits (removed the SO_2 limit and added the H_2S limit) and added a biogas combustion restriction.

PTC17002 (ACP-17816 v1.0), issued 8/31/2017; revised the emission limits set in ACP-17511 v1.0 for the lime kiln (EU 11) and lime slaker (EU 12) and incorporated 40 CFR 63, Subpart DDDDD (MACT 5D) emission limits applicable to the boiler units (EU 1 and 2). The lime kiln SO_2 and VOC limits were not BACT; emissions testing was not required.

T5-X75001, Renewal No. 3, Revision No. 0 (AOP-28455 v4.0), issued 9/14/2018; incorporated 5/19/2014 letter, ACP-17511 v1.0, ACP-17731 v1.0, ACP-17816 v1.0 and administrative changes.

T5-X75001, Renewal No. 4, Revision No. 0 (AOP-28455 v5.0), issued 2/18/2020; administrative changes.

PTC20040 (ACP-17993 v1.0), issued 11/17/2020; emission limit revisions for the biogas flare (EU 13); SO_2 synthetic minor limitation (12-month rolling total) for PSD.

Current Action: On January 3, 2022, the Department received an application dated December 21, 2021 from the American Crystal Sugar Company for revision (significant modification) of the

Hillsboro Plant Title V Permit to Operate No. AOP-28455. The changes in the draft permit are mainly due to the incorporation of ACP-17993 v1.0.

The Department proposes to issue Title V Permit to Operate No. AOP-28455 v5.1 after the required 30-day public comment period and subsequent 45-day EPA review. This statement of basis summarizes the relevant information considered during this revision of the Title V permit. The legal basis for each permit condition is stated in the draft permit under the heading of "Applicable Requirement."

Applicable Programs/As-Needed Topics:

1. **Title V.** The facility is considered a major source under NDAC 33.1-15-14-06 (40 CFR 70) due to potential emissions of PM_{10}, SO_2, NO_x, CO and VOC above 100 tons per year, and a Hazardous Air Pollutant (HAP), hydrogen chloride (HCl), above 10 tons per year.

2. **New Source Performance Standards (NSPS).** The following NDAC 33.1-15-12-03 and 40 CFR 60 subparts apply to the facility.

   Subpart A, General Provisions, applies to each source unit to which another NSPS subpart applies.

   Subpart Db, Standards of Performance Industrial-Commercial-Institutional Steam Generating Units) applies to the boilers (EU 1 and 2) because they were constructed after June 19, 1984 (construction started in 1985), and they have a heat input rate greater than 100 million Btu per hour (actual 237 million Btu per hour).

3. **National Emission Standards for Hazardous Air Pollutants (NESHAP).** No NDAC 33.1-15-13 and 40 CFR 61 subparts apply to the facility, with the possible exception of NDAC 33.1-15-13-02 (40 CFR 61), Subpart M (National Emission Standard for Asbestos) which may apply during facility modifications involving asbestos.

4. **Maximum Achievable Control Technology (MACT).** The following NDAC 33.1-15-22-03 and 40 CFR 63 subpart applies to the facility, which is a major source of HAPs.

   Subpart A, General Provisions, applies to all source units to which another MACT subpart applies.

   Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines applies to the emergency fire pump (EU 21).

   Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters applies to the boilers (EU 1 and 2).

5. **Acid Rain.** 40 CFR 72 through 78 as incorporated into NDAC 33.1-15-21 do not apply to the facility since it is not an existing electric utility steam generating plant.

6. **Prevention of Significant Deterioration (PSD).** The facility is a major source under NDAC 33.1-15-15 and 40 CFR 52.21 because it has the potential to emit 250 tons per year or more of a regulated NSR pollutant during normal operations. There are no changes contained in this permit revision that increase potential emissions by a PSD-significant amount. Therefore, this draft permit is not subject to PSD review.

7. **BACT.** Since there are no changes contained in this draft permit that increase potential emissions by a PSD-significant amount, a BACT review is not required for this draft permit.

8. **Gap Filling.** This permit contains gap filling for testing, monitoring or recordkeeping not otherwise required by rule. The gap filling conditions are generally identified by the applicable requirement: NDAC 33.1-15-14-06.5.a(3)(a). There are no changes to gap filling in this draft permit.

9. **Streamlining Decisions.** Some emission limits that would have been otherwise applicable are not represented in the permit because more stringent limits apply. The $lb/10^6$ Btu emission limits for the boilers (EU 1 and 2) established by 40 CFR 63, Subpart 5D are more stringent than the $lb/10^6$ Btu emission limits established by 40 CFR 60, Subpart Db. There are no changes to the previous streamlining decisions in this draft permit.

10. **Compliance Assurance Monitoring (CAM).** CAM applies to the electrostatic precipitators for boilers 1 and 2 (EU 1 and 2/EP 1 and 2), the cyclones and wet scrubber for the pulp dryer (EU 3/EU 3A), the baghouses for the sugar dryer/cooler (EU 5/EP 5), pellet mill equipment (EU 9/EP 9), sugar screen/scale/conveyors (EU 10/EP 10) and pulp pellet loadout (EU 22/EU 22). There are no changes to CAM in this draft permit.

11. **Permit Shield.** Permit shield does not apply because the permit to operate does not contain a permit shield.

12. **New Conditions/Limits.** The draft permit incorporates the changes from ACP-17993 v1.0. Specific changes are identified in the "Permit Changes by Section" below.

13. **40 CFR 98 - Mandatory Greenhouse Gas Reporting.** This rule requires sources above certain emission thresholds to calculate monitor and report greenhouse gas emissions. According to the definition of "applicable requirement" in 40 CFR 70.2, neither Subpart 98 nor Clean Air Act Section 307(d)(1)(V), the CAA authority under which Subpart 98 was promulgated, are listed as applicable requirements for the purpose of Title V permitting. Although the rule is not an applicable requirement under 40 CFR 70, the source is not relieved from the requirement to comply with the rule separately from compliance with their Part 70 operating permit. It is the responsibility of each source to determine applicability to the subpart and to comply, if necessary.

Permit Changes by Section In this Draft:

Note: Administrative changes were made to some sections to update to the current North Dakota format and to correct errors. In addition, the Permit to Operate number and references to Permit to Construct numbers have been updated to accommodate a new database (CERIS-ND). These changes may not be specifically addressed below.

Cover: Permit Number, Renewal and Revision were updated.

Table of Contents: No change.

1. **Emission Unit Identification**: No change.

2. **Applicable Standards, Restrictions and Miscellaneous Conditions**: Applicable requirement PTC numbers were updated for those designated in CERIS-ND. Flare stack height and flare restrictions for EU 13 were added from ACP-17993 v1.0.

3. **Emission Unit Limits**: Applicable requirement PTC numbers were updated for those designated in CERIS-ND. Flare emissions for EU 13 were revised per ACP-17993 v1.0.

4. **Monitoring Requirements and Conditions**: Flare monitoring for EU 13 was revised per ACP-17993 v1.0.

5. **Recordkeeping Requirements**: Flare recordkeeping for EU 13 was updated per ACP-17993 v1.0 monitoring.

6. **Reporting**: No change.

7. **Facility Wide Operating Conditions**: Condition 7. G was revised to reflect the current ND facility wide operating conditions.

8. **General Conditions**: Condition 8.E was revised to reflect the current ND general conditions.

9. **State Enforceable Only Conditions (not Federally enforceable)**: No change.

Attachment A, CAM Plan: No change.

Comments/Recommendations: It is recommended that Title V Permit to Operate AOP-28455 v5.1 be processed and considered for issuance following a 30-day public comment period and a subsequent 45-day EPA review period.